Climate Week NYC Panel Event: Innovative Approaches for Scaling up Climate-Smart Agriculture

September 2016

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GACSA GLOBAL ALLIANCE FOR CLIMATE-SMART AGRICULTURE
CGIAR
RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security
CCAFS
CTA
IRI International Research Institute for Climate and Society
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Innovative Approaches for Scaling up Climate-Smart Agriculture

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Workshop Report

CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)

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Abstract

On 21 September 2016, the Global Alliance for Climate-Smart Agriculture (GACSA), the Technical Centre for Agricultural and Rural Cooperation (CTA), the CGIAR research program on Climate Change, Agriculture and Food Security (CCAFS) and the International Research Institute for Climate and Society (IRI) hosted a panel event on "Innovative Approaches for Scaling Up Climate-Smart Agriculture." The event was held as part of New York Climate Week, and featured a panel of international experts.

Climate-smart agriculture (CSA) is a vision and approach for sustainably transforming agriculture to be more productive and profitable, more resilient to climate across time scales, and part of the solution to the increasing greenhouse gas burden, in the face of a changing climate. The panel brought in a range of perspectives on how to achieve these often context-specific challenges at scale. Panellists recognized that there no single solution to the challenge of ensuring a food-secure future in the face of a changing climate. But there are many innovations that have been demonstrated successfully, and provide lessons for scaling up.

Panel presentations and subsequent discussion brought out several key points. Some of the most promising innovations for scaling up CSA—including climate information services, insurance, and support from the global food industry—go beyond farm-level technologies and practice to foster an enabling institutional environment. Costa Rica's CSA strategy showcases how national policy can foster the CSA "triple win." Finally, scaling up CSA – making smallholder agriculture more productive and resilient in the face of a changing climate, while reducing agriculture's contribution to climate change – requires effective, sustained partnerships among governments, the private sector, the research community, and the development (including NGO) community.

Keywords

Climate Smart Agriculture; Scaling; Partnership; Innovation

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Acknowledgements

The event was organized by Olga Trynkova (GACSA), Olu Ajayi (CTA) and James Hansen (CCAFS and IRI). Francesco Fiondella, Elisabeth Gawthrop (IRI), Dannie Dinh (IRI), Vanessa Meadu (CCAFS) and Emma Belgasmi supported communications for the event. Pam Henderson (IRI) supported logistics during the event. We gratefully acknowledge financial support for this event from the Global Alliance for Climate-Smart Agriculture (GACSA) and the Technical Centre for Agricultural and Rural Cooperation (CTA). We thank the moderator Mi Nguyen; the panel members, HE Luis Felipe Arauz Cavallini, Lindiwe Sibanda, Diane Holdorf, Paula Pagniez, James Hansen; and their host organizations for their invaluable contribution to the content of the event.

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Acronyms

CCAFS	CGIAR research program on Climate Change, Agriculture and Food Security
CSA	Climate Smart Agriculture
CTA	Technical Centre for Agricultural and Rural Cooperation
GACSA	Global Alliance for Climate Smart Agriculture
IRI	International Research Institute for Climate and Society
USAID	United States Agency for International Development

Introduction

Agriculture has often been identified as a sector highly vulnerable to climate change impacts due to its dependence on weather and susceptibility to climate variability and change. There is now a growing recognition of agriculture's contribution to climate change as well as the potential of agriculture to mitigate climate change impacts. Climate-smart agriculture (CSA) represents a vision and approach for sustainably transforming agricultural systems to be more productive and profitable for farmers, more resilient in the face of a variable and changing climate, and contribute less to the burden of greenhouse gasses that drive climate change. There have been some successful cases of implementation of CSA in some region and efforts to achieve widespread scale up. Successful implementation of CSA should be knowledge-driven and, require innovative efforts to build partnership across a broad range of actors.

On 21 September 2016, the Global Alliance for Climate-Smart Agriculture (GACSA), the Technical Centre for Agricultural and Rural Cooperation (CTA), the CGIAR research program on Climate Change, Agriculture and Food Security (CCAFS) and the International Research Institute for Climate and Society (IRI) hosted a panel event on "Innovative Approaches For Scaling Up Climate-Smart Agriculture." The event was held as part of New York Climate Week and coincided with the United Nations' first General Assembly meeting since the adoption of the Paris Agreement in December 2015. It featured a panel of international experts, moderated by Mi Nguyen, co-Chair of the GACSA Strategic Committee.

Program Highlights

Advancing CSA through partnerships

Mi Nguyen, co-Chair of the Strategic Committee of GACSA, opened the event with an introduction to climate-smart agriculture (CSA) and to GACSA. GACSA is an independent, inclusive, voluntary and action-oriented muti-stakeholder platform of more than 150 members, including governments from developing and developed countries, research and

academic institutions, farmers' organizations, NGOs, businesses, intergovernmental organizations, etc. GACSA works to advance the three pillars of CSA globally:

- Improve farmers' agricultural productivity and incomes in a sustainable way;
- Build farmers' resilience to extreme weather and changing climate; and
- Reduce greenhouse gas emissions associated with agriculture, when possible.

GACSA's work is led by its Strategic Committee and organized in three Action Groups: Knowledge, Investment, and Enabling Environment.

Lindiwe Sibanda, CEO, Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN), recognized that partnerships amongst FANRPAN member countries allowed for the initial foundational work to take place. Climate change is a complex problem requiring multiple actors and prone to failed policies, especially within the agriculture sector. As the government is often the leading facilitator of change, within each country there must be a conducive policy and institutional environment for CSA to be widely adopted. Sibanda outlined three key elements to scale up this conducive policy and institutional environment:

- Leadership of policymakers as well as champions from within civil society, including researchers, farmers/producers, and the private sector;
- Strengthening of local institutions with information and ownership of the information being disseminated; and
- Expanding the evidence base, especially through data that is locally generated from the bottom up, processed and owned by those most affected.

Alliance networks such as GACSA provide a platform for studying and learning from good practices across countries and continents. FANRPAN is active in 17 African countries. The success cases that stand out—Tanzania, Kenya, and Zambia—offer many lessons for the others to design and implement their own programs.

Supporting smallholder farmers

Throughout the discussion, all speakers recognized that innovative approaches in CSA must support smallholder farmers, the key players. Smallholder farmers produce about 70% of the food consumed worldwide, and are the ones most vulnerable to climate change impacts, Nguyen remarked. Having observed many successes and failures in FANRPAN's regional network, Sibanda emphasized the importance of recognizing and linking all constituencies in

creating new policies, especially smallholder and women farmers, to ensure there is sufficient participation and buy-in.

Developing an enabling environment for CSA

The second pillar of CSA is "resilience." James Hansen, CCAFS Flagship Leader on Climate Information Services and Climate-Informed Safety Nets, noted that framing the challenge in terms of "resilience," rather than "adaptation," represents a welcome shift in the focus – from what agriculture needs to look like in a future climate scenario, to what can be done now to start the journey towards adapting agriculture to climate challenges across time scales. Since many development organizations are adding resilience to their goals, the concept is reducing the divide between the development and climate agendas.

Diane Holdorf, Vice-President and Chief Sustainability Officer of Kellogg Company, highlighted how the food industry is expanding its climate change stewardship focus from greenhouse gas mitigation to the resilience of farmers. As a global food company, Kellogg can contribute to CSA by supporting market access for smallholder farmers—particularly women farmers who constitute more than the majority of farmers, building consumer awareness of the issues, and providing a voice of leadership with others in the private sector.

Hansen briefly discussed how climate information services are part of an enabling environment for CSA. Future climate scenarios have played a key role in the mitigation discussion, providing a motivation for reducing emission and setting targets. A broader range of climate information supports adaptation and resilience-building for smallholder farmers. Understanding the trends and variability of local climate allow for farmers to better plan and adjust their agricultural practices and for planners and researchers to better tailor their work for the local community. Having a longer lead-time and clearer forecast allow for better preparedness and more cost-effective response for crises. Capacity to provide locally relevant climate information, and capacity to communicate this information in a manner that empowers rural communities, are two key bottlenecks that must be addressed in order to scale up climate information services for smallholder farmers. Hansen described promising recent innovations for addressing both of those bottlenecks, and cited how work in Rwanda is bringing these innovations together at a national scale.

Paula Pagniez, Senior Microinsurance Specialist and Vice President of Global Partnerships, Swiss Re Corporation, noted the striking contract between economic impacts of extreme weather events and the low degree of insurance penetration particularly in the developing world. The agricultural sectors absorb about 22% of economic impacts of natural disasters, and that rate can go up to 80% in the case of a drought. There are tremendous uncertainties and risks that farmers must face, especially as climate continues to change. Risk mitigation and adaptation can only go so far, and there remain some risks that cannot be prevented. These risks can be transferred into the insurance system that can absorb the shocks of climate impacts in the food production system. Pagniez emphasize that insurance is one part of the toolkit for making agriculture more resilient, after other preventative tools and techniques have been implemented. She described an example of an innovative insurance program that covers 5000 pastoralists in 2 counties in Kenya. Instead of providing payouts to compensate for loss of cattle following an extreme event such as a drought, this program will provide payouts to farmers early, so that they are able to stockpile water and feed to prevent the loss of cattle. If it works as intended, it will be expanded to the rest of the country.

National governments can foster CSA "triple wins"

His Excellency Luis Felipe Arauz Cavallini, Minister of Agriculture and Livestock, Costa Rica, remotely joined the conversation to share what Costa Rica has done through agricultural system reforms to solve the intricately linked issues of poverty, food security, and environmental impacts. He argued that agriculture's contribution to the global greenhouse gas burden represents inefficiencies and waste within in the production system. Therefor sound national policies can improve production while reducing emissions, thus achieving the "triple win" (productivity, resilience, mitigation) of CSA. He shared examples of local policies and partnerships, such as a gasoline tax to promote ethanol produced from sugarcane by-product and support for farmers to achieve carbon neutral certification. The Costa Rican government also keep metrics to report changes as farmers adapt to new techniques and technologies, and they hope to share the results regionally. There is a consumer demand for sustainably grown food. When consumers, local or international, purchase carbon neutral farm products from Costa Rica, like coffee, they are supporting climate-smart agriculture as well as emission reduction.

Effective public-private partnership is a catalyst

Sibanda recognized that, even through a supportive regional network, governments cannot do it alone but rely on partnerships with research, NGOs and the private sector. On the other hand, while private companies can use their global brand and leadership to spur innovations and make tremendous impacts through their supply chain, they cannot accomplish this without working with the government in country and the NGOs that have the local experience and expertise. This point was echoed by the two speakers representing the private sector. Pagniez shared that in order for insurers and reinsurers (providers of insurance for insurers) to reach the communities that they serve and to scale up in capacity to take more risk, they need public-private partnerships that are more permanent and longer lasting—rather than short-term joint initiatives. When insurance and reinsurance are framed within the safety nets provided to farmers, then governments and NGOs can step in to provide funding and subsidies when necessary until the insurance premium becomes affordable to farmers. Pagniez pointed to a collaboration with the IRI and CCAFS in Ethiopia's small villages, where most smallholder farmers are now able to afford the insurance premium.

In the case of Kellogg Company, their partnerships with the International Rice Research Institute's local entity and the Thai government, and with USAID and the Bangladeshi government have helped them successfully secure more efficient value chains in Thailand and Bangladesh. And in that same process, Kellogg Company empowered smallholder farmers with new skills and techniques, more efficient crop varietals, and new market access opportunities. Holdorf, shared that their partnership in Thailand has recently been recognized by the Thai Royalty as one of the first successful public-private partnership. As consumers are aware of climate issues and become more interested in sustainable products, the motivation goes beyond security supplies—the commitment to source sustainable ingredients and support CSA and smallholder farmers has become Kellogg Company's global brand.

Conclusions

CSA is a vision and approach for sustainably transforming agriculture to be more productive and profitable, more resilient to climate across time scales, and part of the solution to the increasing greenhouse gas burden, in the face of a changing climate. The panel brought in a

range of perspectives on how to achieve these often context-specific challenges at scale. Panellists recognized that there no single solution to the challenge of ensuring a food-secure future in the face of a changing climate. But there are many innovations that have been demonstrated successfully, and provide lessons for scaling up.

Advancing CSA at the scale of the challenge requires effective partnership among governments, research, development organizations and the private sector; and with the smallholder farmers who are the producers of much of the food supply, but who are among the most vulnerable segment of society to a changing climate. GACSA represents a global partnership across concerned governments, institutions, businesses, organizations, NGOs, intergovernmental organizations, etc. Panel contributions highlighted examples of effective partnerships regionally, within countries, and among global food companies.

Some of the most promising innovations for scaling up CSA go beyond farm-level technologies and practice, to foster an enabling institutional environment. Panellists highlighted the contributions of climate information services, index-based insurance, and the increasingly proactive role of the global food industry in fostering resilience of farmer suppliers.

Costa Rica's CSA strategy showcases how national policy can foster the CSA "triple win" – improving the profitability and resilience of agriculture, while reducing its net contribution to global climate change. There was a strong consensus that scaling up CSA – making smallholder agriculture more productive and resilient in the face of a changing climate, while reducing agriculture's contribution to climate change – requires effective, sustained partnerships among governments, the private sector, the research community, and the development (including NGO) community.

Appendix 1: Panellists

Figure 1. (from left to right) Moderator Mi Nguyen and panelists Paula Pagniez, James Hansen, Lindiwe Sibanda, and Diane Holdorf. Photo by Francesco Fiondella (IRI).

Moderator: Ms Mi Nguyen, co-Chair of the Strategic Committee, Global Alliance for Climate Smart Agriculture (GACSA)

Prior to her election as GACSA co-Chair (June 2016), Mi was an active member of the Strategic Committee and the Annual Forum Task Team, where she contributed to the organisation of the Annual Forum. She is the Deputy Permanent Representative of Canada to the UN Food and Agriculture Organisation (FAO), and serves on the FAO Committee on World Food Security (CFS). A lawyer by training, she has worked as a Canadian diplomat for more than 15 years, on a range of global issues. She holds a bachelor degree in Law (Common law and Civil law) and a master's degree in International Relations.

HE Luis Felipe Arauz Cavallini, Minister of Agriculture and Livestock, Costa Rica.

As Minister of Agriculture and Livestock, Luis Felipe is an effective champion of the three pillars of CSA, and of transforming agriculture to be more sustainable, more knowledge-intensive, and more profitable. Until May 2014, he was a professor of Plant Pathology and Agroecology at the University of Costa Rica, and Dean of its College of Agricultural and Food Sciences. He has also been an executive of the School of Agronomical Engineers of Costa Rica, executive of the Institute of Agricultural Innovation and Technology Transfer of the Ministry of Agriculture of Costa Rica, and Coordinator of several international

cooperation actions in the area of agriculture. Luis Felipe earned his doctorate in plant pathology from North Carolina State University in 1990.

Ms Lindiwe Sibanda, CEO, Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN).

Lindiwe has over 25 years of trans-disciplinary experience in rural development, public sector reforms and private sector management. She is a trained animal scientist, an authoritative leader in agriculture climate change and nutrition, and a trained professional dialogue facilitator for multi-cultural groups. In her position at FANRPAN, which she has held since 2004, she coordinates policy research and advocacy programmes aimed at making Africa a food and nutrition secure region. She has served as trustee and adviser to numerous international food security-related initiatives and institutions.

Ms Diane Holdorf, Vice-President and Chief Sustainability Officer, Kellogg Company

As Chief Sustainability Officer and Vice President of Environmental Stewardship, Health and Safety at The Kellogg Company, Diane leads development of the strategic direction on corporate responsibility, global environmental stewardship to assure compliance with environmental regulations while working to reduce the total environmental impact of Kellogg Company operations. She also leads global employee safety and health programs at Kellogg Company. Prior to joining Kellogg, she served as Vice President for Delta Consultants, a U.S. based environment, health and safety, and sustainability consulting firm.

Ms Paula Pagniez, Senior Microinsurance Specialist, Vice President, Global Partnerships, Swiss Re Corporation

Paula joined Swiss Re in 2011 as a senior microinsurance specialist. She has over 10 years international experience in insurance, microfinance, microinsurance and the public sector. Prior to Swiss Re, Paula worked with a number of leading microfinance and international development organizations including Planet Finance, FINCA and NetGuarantee, fostering financial inclusion and innovative insurance solutions for emerging markets. She holds a Degree in Economics from the University of Buenos Aires and a Masters in Finance from St Andrew's University in Argentina.

Mr James Hansen, CCAFS Flagship Leader: Climate Information Services and Climate-Informed Safety Nets

Jim has been a Flagship Leader within CCAFS since 2010. He is also a Senior Research Scientist at the International Research Institute for Climate and Society (IRI), at Columbia University, New York, where he has worked since 1999. His research focuses on finding practical, equitable and scalable solutions to the challenges of making smallholder livelihoods more resilient through climate services, climate-related insurance, and climate-informed food security management. Jim holds a Ph.D. in Agricultural and Biological Engineering from the University of Florida.

Appendix 2: List of participants

First Name	Last Name	Organization	Title	Country	Representing
Jonalyn Faith	Arbotante	N/A	Student	USA	Research & Academia
Ralph	Baker	N/A	N/A	USA	Private Sector
Joshua	Basofin	Forum for the Future	Principal Sustainability Advisor	USA	NGO
Paulette	Bethel	International Agri-Food Network	Senior Advisor	International	Private Sector
Helen	Burdett	Globality	Energy, Environment, and Social Impacts	USA	Private Sector
Angela	Chen	Impact Capitalyst	Senior Analyst	Canada	Private Sector
Caitlin	Corner-Dolloff	USDA	CSA Program Manager	USA	Government
Brooke	Davis	Permian Global	Marketing	USA	Research & Academia
Dannie	Dinh	IRI	Special Assistant to the Director	USA	Research & Academia
Lea	Felluss	Philip Morris International	Manager External Engagement	USA	Private Sector
Gabriel	Ferrero	United Nations	Senior Policy Advisor	Spain	UN - EOSG
Francesco	Fiondella	IRI	Director of Communications	USA	Research & Academia
Celso	Fiori	GranBio	Director	Brazil	Private Sector
Elisabeth	Gawthrop	IRI	Communications	USA	Research & Academia
Vincenzo	Giordano	EnerKnol	Product Manager		Private Sector
Sherin	Gobran	SRG Consulting	Founder	USA	Private Sector
Emily	Gorbaty	Independent			NGO
Nora	Guerronache	McKinsey & Co		Morocco	Private Sector
Tom	Hammond	Global Environment Facility (UNEP)	Secretary, Scientific & Technical Advisory Panel	USA	Inter-governmental organizations
James	Hansen	IRI/CCAFS	Senior Research Scientist, CCAFS Flagship Leader		Research & Academia
Pamela	Henderson	IRI	Projects Coordinator	USA	Research & Academia
Karine	Hertzberg	Royal Norwegian Embassy	Counsellor for climate and environment	Norway	Government

Diane	Holdorf	Kellogg Company	Vice President and Chief Sustainability Officer	USA	Private Sector
Raffaela	Kozar	Agriculture and Food Security Center, Earth Institute	Research Project Manager	USA	Research & Academia
Simone	Lee	Freelance		Australia	NGO
Howard	Li	Climate Analytics			NGO
Jack	Luft	Freelance	Researcher and Writer	USA	NGO
Trina	Mallik	Transitioning to Green			Private Sector
Natalia	Marczewska	Portland PR	Account Manager	UK	Private Sector
Patricia	Marion	COFCO AGRI - Coffee Division	Sustainability Manager	USA	Private Sector
Adriana	Martín	ECOTECNICA	Climate Change Manager	Colombia	NGO
Marie-Therese	Maurice	One Minute for Earth	Founder and Director	USA	NGO
Tim	McDonnell	Fulbright-National Geographic	Fellow	USA	Research & Academia
John	Meyers	Swisscontact	Managing Director - North America	USA	NGO
Elisabeth	Micheli	Pepperwood Foundation	President	US	NGO
Danika	Moore	Rainforest Alliance	Intern	USA / Poland	NGO
Christine	Negra	Versant Vision	Principal	USA	Private Sector
Francesca	New	Mars Inc.	Global Sustainable Sourcing Insight Manager	UK	Private Sector
Ashley	Ng	Impact Capitalyst	Vice President	Canada	Private Sector
Mi	Nguyen	GACSA	Co-Chair of the Strategic Committee		NGO
Steve	Nicholls	NBI			
Daniel	Osgood	IRI C U	Lead Scientist FIST	USA	Research & Academia
Paula	Pagniez	Swiss Re Corporation	Senior Microinsurance Specialist, Vice President of Global Partnerships		Private Sector

Agus	Purnomo	Golden-Agri Resources Ltd.	Managing Director, Sustainability & Strategic Stakeholders Engagement	Indonesia	Private Sector
Maria	Ramos	Agrorural	Agronomia	Peru	Farmer's organizations
Beth	Richmond	BSR	Associate	USA	NGO
Massimilian o	Riva	UNDP	Policy Specialist, Innovative Finance	Italy	Inter-governmental organizations
Stanlake	Sanbenje	UNWFP			NGO
Bridget	Scallen	FarmShare.NYC			NGO
Marlen	Schuepbach	United Nations	Policy Advisor		Inter-governmental organizations
Alina	Seebacher	WFP	External Relations Assistant		Inter-governmental organizations
Lindiwe Majele	Sibanda	FANRPAN	Chief Executive Officer and Head of Mission	South Africa	NGO
Asher	Siebert	IRI	Postdoc	USA	Research & Academia
Bernhard	Stormyr	Yara	Head of Sustainability Management	Norway	Private Sector
Diana	Szpotowicz	GODAN	Strategic Communications Advisor	United Kingdom	NGO
Dan	Tefft	Clime-IT.com	Founder	USA	Private Sector
Margaret	Tran	Bread for the World			
Amanda	Tucker	CDP	Sector Lead	USA	NGO
Xingjian	Wang	Science and Technology Daily			Research & Academia
Brittany	Wienke	Rainforest Alliance	Communications & Media Outreach Associate	USA	NGO
Betty	Yee	CalPERS	California State Controller	USA	Government
Tao	Zhang	City College		USA	Research & Academia